

ABSTRACT OF THE DISCLOSURE

The present invention is directed to a gas separator for fuel cells obtained as a laminate of unit cells, wherein the gas separator is one constituent of each unit cell, fuel cells using such gas separators, and a method of manufacturing such a gas separator. The gas separator is obtained by press molding a metal plate. The process of forming predetermined rugged shapes in both faces of the gas separator by press molding causes the gas separator to be distorted. The distortion of the gas separator results in a variety of problems.

A gas separator (30) of the present invention has a base plate unit (60) that is obtained by bonding two base plates (62) and (64) molded to have predetermined rugged shapes to each other, filler units (66) that are formed in spaces defined by the two base plates (62) and (64) corresponding to the predetermined rugged shapes of the base plates (62) and (64), and a coat layer (68) that is formed on surface of the base plate unit (60). In the separator (30) of this configuration, distortions occurring in the base plates (62) and (64) molded to have the predetermined rugged shapes are mutually corrected by joining the two base plates (62) and (64) with each other. This arrangement thus effectively prevents a distortion from occurring in the separator (30). An electrically conductive material is interposed between the pair of base plates (62) and (64) to form the filler units (66). This enhances the electrical conductivity and the thermal conductivity of the separator (30).